

REMARKS

The Office Action dated September 27, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-2, 4, 6-8, 10-17, and 20-29 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claims 5, 9, and 30 have been cancelled. Claim 31 has been added. No new matter has been added and no new issues are raised which require further consideration or search. Therefore, claims 1-4, 6-8, 10-29, and 31 are currently pending in the application and are respectfully submitted for consideration.

The Office Action rejected claims 1-5, 7-9 and 11-30 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,321,092 ("Fitch '092"). The rejection is respectfully traversed for at least the following reasons.

Claim 1, upon which claims 2-4, 6-8, and 10-28 are dependent, recite a method, which includes selecting and applying one of a plurality of available location methods to estimate a location of a mobile terminal in a communications network, and selecting and applying one of a plurality of available confidence methods to calculate a region around the estimated location in which the terminal could be located within a specified probability.

Claim 29 recites an apparatus, which includes means for selecting and applying one method from a plurality of location methods to estimate a location of a mobile

terminal in a communications network, and means for selecting and applying one method from a plurality of confidence methods to calculate a region around the estimated location in which the mobile terminal could be located.

Claim 31 recites an apparatus, which includes an estimator configured to select and apply one method from a plurality of location methods to estimate a location of the mobile terminal, and a calculator configured to select and apply one method from a plurality of confidence methods to calculate a region around the estimated location in which the mobile terminal could be located.

Thus, according to embodiments of the invention, a mobile terminal is able to be located within a mobile telephone network. Thus, the mobile telephone network can provide customer services which rely on knowing the whereabouts of users of these services. For example, up-to-date local traffic information can be provided to enable a user to avoid nearby traffic jams. Another example is that the location of a pub or restaurant closest to the user can be provided to the user based on the location of the user.

As will be discussed below, Fitch '092 fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the advantages and features discussed above.

Fitch '092 generally discloses a method for use in a wireless network to obtain requested location information regarding a wireless station from any of various location sources and to provide the requested location information to a wireless location application. The wireless network is associated with at least two sources of location

information for providing information regarding locations of wireless stations in the network. (see Fitch '092 at col. 13, lines 8-15).

Fitch '092 further discloses a wireless network including an mobile switching center (MSC) 112 for use in routing communications to or from wireless stations 102, a network platform 114 associated with the MSC 112, and a variety of location finding equipment (LFE) systems. A location finding system (LFS) 116 is resident on the platform 114. The LFS 116 receives location information from the LFEs 104, 106, 108, and 110 and provides location information to wireless location based applications 118. The LFS receives input information at varying time intervals of varying accuracies and in various formats, and can provide standardized outputs to the applications 118. Multiple inputs may also be co-processed for enhanced accuracy. (see Fitch '092 at Abstract).

Applicants respectfully submit that Fitch '092 fails to disclose, teach, or suggest, all of the elements of the present claims. For example, Fitch '092 fails to disclose, teach, or suggest, at least, "selecting and applying one of a plurality of available confidence methods to calculate a region around the estimated location in which the terminal could be located within a specified probability," as recited in claim 1; "means for selecting and applying one method from a plurality of confidence methods to calculate a region around the estimated location in which the mobile terminal could be located," as recited in claim 29; and "a calculator configured to select and apply one method from a plurality of confidence methods to calculate a region around the estimated location in which the mobile terminal could be locate," as recited in claim 31.

As described above, Fitch ‘092 discloses a method of using one or more multiple location methods to determine a mobile device’s location. (see Fitch ‘092 at col. 2, lines 23-29). Fitch ‘092 further discloses that within the method, first and second inputs from first and second LFEs, and location information is stored in memory based on these inputs. Then, once a location request regarding a wireless station is received from a wireless location application, the location information is retrieved from memory, and a response to the location request is outputted to the wireless location application. (see Fitch ‘092 at col. 2, lines 44-50). Thus, Fitch ‘092 merely discloses that the method uses confidence values associated with the location determination method selected. Fitch ‘092 does not disclose selecting a confidence method from a plurality of confidence methods to calculate a region around the estimated location, as Fitch ‘092 fails to disclose either a plurality of available confidence methods to calculate a region around the estimated location, or a selection of a confidence method from said plurality of available confidence methods.

Thus, Fitch ‘092 fails to disclose, teach, or suggest, at least, “selecting and applying one of a plurality of available location methods to estimate a location of a mobile terminal in a communications network,” and “selecting and applying one of a plurality of available confidence methods to calculate a region around the estimated location in which the terminal could be located within a specified probability,” as recited in claim 1; “means for selecting and applying one method from a plurality of location methods to estimate a location of a mobile terminal in a communications network,” and

“means for selecting and applying one method from a plurality of confidence methods to calculate a region around the estimated location in which the mobile terminal could be located,” as recited in claim 29; and “an estimator configured to select and apply one method from a plurality of location methods to estimate a location of a mobile terminal in a communications network,” and “a calculator configured to select and apply one method from a plurality of confidence methods to calculate a region around the estimated location in which the mobile terminal could be located,” as recited in claim 31.

Therefore, for at least the reasons discussed above, Fitch ‘092 fails to disclose, teach, or suggest, all of the elements of claims 1, 29, and 31. For the reasons stated above, Applicants respectfully request that this rejection be withdrawn.

Claims 2-4, 7-8, and 11-28 depend upon claim 1. Thus, Applicants respectfully submit that claims 2-4, 7-8, and 11-28 should be allowed for at least their dependence upon claim 1, and for the specific limitations recited therein.

The Office Action rejected claims 1, 6, and 10 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,212,392 (“Fitch ‘392”). The rejection is respectfully traversed for at least the following reasons.

Fitch ‘392 generally discloses a method for determining whether a location associated with a wireless station, such as a cellular telephone, is located within an area of interest. The area of interest is defined using quadtree representation of an area that includes the area of interest and identifying nodes within the quadtree that represent the area of interest. By iterative comparison of the location associated with the wireless

station to the locations associated with a node at each level of the quadtree, a determination can be made as to whether or not the location associated with the wireless station is within the area of interest. (see Fitch '392 at Abstract).

Applicants respectfully submit that Fitch '392 fails to disclose, teach, or suggest, all of the elements of the present claims. For example, Fitch '392 fails to disclose, teach, or suggest, at least, "selecting and applying one of a plurality of available location methods to estimate a location of a mobile terminal in a communications network," and "selecting and applying one of a plurality of available confidence methods to calculate a region around the estimated location in which the terminal could be located within a specified probability," as recited in claim 1.

As described above, Fitch '392 describes a method of determining whether a mobile device is within a specified location area and describes the use of iteratively comparing the location of the mobile device to locations within a quad-tree representation to determine whether the device is within one of the locations. (see Fitch '092 at col. 1, line 65 – col. 2, line 24). Specifically, the computer system 36 of Fitch '392 receives a location associated with a cellular telephone from a location finding system 54. The location finding system 54 receives location information relating to the cellular telephone from one or more sources. Once the computer system 36 is provided with cellular telephone location information, the computer system 36 provides an indication of whether the location associated with a cellular telephone is within one or more areas of interest. (see col. 7, lines 36-40; col. 8, lines 18-22). Therefore, Fitch '392 fails to

disclose both selecting a location method from a plurality of location methods to estimate a location, and selecting a confidence method to calculate a region, as the location finding system of Fitch ‘392 merely determines the location of the cellular telephone without a selection process, and the computer system merely provides an indication of whether a location is within one or more areas of interest, again without a selection process.

Thus, Fitch ‘392 fails to disclose, teach, or suggest, at least, “selecting and applying one of a plurality of available location methods to estimate a location of a mobile terminal in a communications network,” and “selecting and applying one of a plurality of available confidence methods to calculate a region around the estimated location in which the terminal could be located within a specified probability,” as recited in claim 1.

Therefore, for at least the reasons discussed above, Fitch ‘392 fails to disclose, teach, or suggest, all of the elements of claim 1. For the reasons stated above, Applicants respectfully request that this rejection be withdrawn.

Claims 6 and 10 depend upon claim 1. Thus, Applicants respectfully submit that claims 6 and 10 should be allowed for at least their dependence upon claim 1, and for the specific limitations recited therein.

The Office Action rejected claim 1 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,282,427 (“Larsson”). The rejection is respectfully traversed for at least the following reasons.

Larsson generally discloses a method and apparatus for selecting location measurement units for measuring an uplink signal transmitted by a mobile communication station operating in a wireless communication network in order to locate the position of the mobile communication station in the wireless communication network. (see Larsson at col. 9, lines 38-42; col. 12, lines 34-39).

Applicants respectfully submit that Larsson fails to disclose, teach, or suggest, all of the elements of the present claims. For example, Larsson fails to disclose, teach, or suggest, at least, “selecting and applying one of a plurality of available location methods to estimate a location of a mobile terminal in a communications network,” and “selecting and applying one of a plurality of available confidence methods to calculate a region around the estimated location in which the terminal could be located within a specified probability,” as recited in claim 1.

As described above, Larsson describes a method of determining which location management unit is best for assessing the location of a mobile device. Specifically, Larsson discloses that the mobile location center orders a number of location measurement units to capture the access burst and measure the time of arrival of each burst at each location measurement unit. (see Larsson at col. 1, lines 36-40). Furthermore, the location measurement units can either be provided with an absolute time reference or a local time reference to be used to measure the time of arrival. (see Larsson at col. 1, lines 40-63). Furthermore, the location measurement units can be synchronized by a GPS system and can estimate the position of a given mobile system using time

difference of arrival techniques. (see Larsson at col. 1, line 66 – col. 2, line 4). However, nowhere does Larsson disclose that each location measurement unit has a different location method to estimate a location of the mobile terminal and nowhere does Larsson disclose that the mobile location center selects a location measurement unit based on the location method it uses. Furthermore, Larsson fails to disclose selecting a confidence method from a plurality of confidence methods to calculate a region around the estimated location.

Thus, Larsson fails to disclose, teach, or suggest, at least, “selecting and applying one of a plurality of available location methods to estimate a location of a mobile terminal in a communications network,” and “selecting and applying one of a plurality of available confidence methods to calculate a region around the estimated location in which the terminal could be located within a specified probability,” as recited in claim 1.

Therefore, for at least the reasons discussed above, Larsson fails to disclose, teach, or suggest, all of the elements of claim 1. For the reasons stated above, Applicants respectfully request that this rejection be withdrawn.

For at least the reasons discussed above, Applicants respectfully submit that the cited prior art references fails to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-4, 6-8, 10-29, and 31 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Petition for Extension of Time
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